# **Complete Summary**

## **GUIDELINE TITLE**

Practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults.

# BIBLIOGRAPHIC SOURCE(S)

American Academy of Child and Adolescent Psychiatry. Practice parameter for the use of stimulant medications in the treatment of children, adolescents and adults. Washington (DC): American Academy of Child and Adolescent Psychiatry; 2001 Jun 4. 96 p. [164 references]

Practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults. J Am Acad Child Adolesc Psychiatry 2002 Feb; 41(2 Suppl): 26S-49S. [164 references]

# **GUIDELINE STATUS**

This is the current release of the guideline.

# **COMPLETE SUMMARY CONTENT**

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis RECOMMENDATIONS EVIDENCE SUPPORTING THE RECOMMENDATIONS

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS CONTRAINDICATIONS

QUALIFYING STATEMENTS

IMPLEMENTATION OF THE GUIDELINE

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

# **SCOPE**

## DISEASE/CONDITION(S)

- Attention-deficit/hyperactivity disorder (ADHD)
- Narcolepsy

# **GUIDELINE CATEGORY**

Evaluation Management Prevention

## CLINICAL SPECIALTY

Family Practice Internal Medicine Pediatrics Psychiatry

#### INTENDED USERS

Advanced Practice Nurses Physician Assistants Physicians

# GUIDELINE OBJECTIVE(S)

- To provide recommendations for the use of stimulants in the treatment of children, adolescents, and adults with attention-deficit/hyperactivity disorder and narcolepsy. Specifically:
  - To review the literature pertinent to the use of stimulants
  - To describe indications and contraindications for stimulant treatment, with an emphasis on judicious use
  - To describe the initiation and dosing of the various stimulant agents
  - To describe the side effects encountered in stimulant treatment
  - To discuss long term maintenance using stimulant agents
  - To discuss the combination of stimulants and other psychotropic agents in the treatment of comorbid conditions

# TARGET POPULATION

Children, adolescents, and adults with attention-deficit/hyperactivity disorder or narcolepsy

## INTERVENTIONS AND PRACTICES CONSIDERED

## Diagnostic assessment

- 1. Psychiatric evaluation including detailed history, collateral information from parents or significant others, documentation of target symptoms, and a mental status examination.
- 2. Documentation of attention-deficit/hyperactivity disorder using Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition (DSM-IV) or International Classification of Diseases-10 (ICD-10) criteria

## Stimulant Treatment

1. Documentation of prior treatment and physical examination (including blood pressure, pulse, height, weight)

- 2. Selecting order of stimulants to be used (stimulants include methylphenidate [Ritalin, Ritalin-SR], dextroamphetamine [Dexedrine, Dexedrine Spansules], mixed salts amphetamine [Adderall\*], and pemoline)
  - \*Note from the National Guideline Clearinghouse: On February 10, 2005, the U.S. Food and Drug Administration (FDA) issued a Public Health Advisory to notify healthcare professionals that Health Canada, the Canadian drug regulatory agency, has suspended the sale of Adderall XR in the Canadian market. Adderall XR is a controlled release amphetamine used to treat patients with Attention Deficit Hyperactivity Disorder (ADHD). The Canadian action was based on U.S. post-marketing reports of sudden deaths in pediatric patients. FDA is continuing to evaluate these and other post-marketing reports of serious adverse events in children, adolescents, and adults being treated with Adderall and related products. Adderall XR is approved in the United States for the treatment of adults and pediatric patients 6-12 years old with ADHD, and Adderall, the immediate release formulation of the drug, is approved for pediatric patients with ADHD. See the FDA Web site for more information.
- 3. Selecting starting doses and deciding on both minimum and maximum doses of stimulants
- 4. Using a consistent titration schedule
- 5. Deciding on method of assessing drug response (e.g., evaluation of target symptoms, parent and teacher rating scales, self-ratings)
- 6. Managing treatment-related side effects
- 7. Providing schedule for monitoring the drug during the maintenance phase

Note: the following are also discussed in the guideline:

- 1. Treatment of attention deficit/hyperactivity disorder with comorbid disorders
- 2. Combination of stimulants with other psychotropic drugs (e.g., (tricyclic antidepressants, bupropion, clonidine)

# MAJOR OUTCOMES CONSIDERED

- Behavioral symptoms of attention-deficit/hyperactivity disorder and associated conditions
- Academic performance
- Symptoms of depression and apathy in medically ill patients
- Daytime sleepiness in patients with narcolepsy
- Medication side effects

## METHODOLOGY

# METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources) Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The literature on stimulant treatment of children with attention-deficit/hyperactivity disorder is voluminous. Books and journals published from 1980 through the end of 2000 were reviewed in detail; older references were included when pertinent. (Key references are marked with an asterisk under "References" in the original guideline document.) A National Library of Medicine Medline search using the keywords dextroamphetamine, methylphenidate, pemoline and Adderall® ensured completeness of coverage. Using Freedom of Information Letters, the Food and Drug Administration supplied data on spontaneous postmarketing reports of side effects from psychostimulants. In addition, the authors drew from their own experience.

#### NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

# DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The validity of scientific findings was judged by design, sample selection and size, inclusion of comparison groups, generalizability, and agreement with other studies.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

# DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Clinical consensus was determined through extensive review by the members of the Work Group on Quality Issues, child and adolescent psychiatry consultants with expertise in the content area, the entire American Academy of Child and Adolescent Psychiatry (AACAP) membership, and the American Academy of Child and Adolescent Psychiatry Assembly and Council.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

[MS] "Minimal Standards" are recommendations that are based on substantial empirical evidence (such as well controlled, double-blind trials) or overwhelming clinical consensus or legal and regulatory requirements. Minimal standards are expected to apply more than 95 percent of the time, i.e., in almost all cases. When the practitioner does not follow this standard in a particular case, the medical record should indicate the reason.

[CG] "Clinical Guidelines" are recommendations that are based on empirical evidence (such as open trials, case studies) and/or strong clinical consensus. Clinical guidelines apply approximately 75 percent of the time. These practices should always be considered by the clinician, but there are exceptions to their application.

[OP] "Options" are practices that are acceptable, but not required. There may be insufficient empirical evidence to support recommending these practices as minimal standards or clinical guidelines. In some cases they may be indicated, but in other cases should be avoided. If possible, the practice parameter will explain the pros and cons of these options.

[NE] "Not Endorsed" refers to practices that are known to be ineffective or contraindicated.

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

# METHOD OF GUIDELINE VALIDATION

Internal Peer Review

#### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This parameter was made available to the entire Academy membership for review in September 2000 and was approved by the Academy Council on June 4, 2001.

## RECOMMENDATIONS

# MAJOR RECOMMENDATIONS

Recommendations are identified as falling into one of four categories of endorsement. These categories, which are defined at the end of the "Major Recommendations" field, indicate the degree of importance or certainty of each recommendation.

## Indications

A clinician determines that a patient (child, adolescent, or adult) has a condition indicated for the use of stimulant medications [MS].

Psychiatric evaluation should include a detailed history (psychiatric and medical) of the patient, collateral information from parents or significant others, documentation of target symptoms, and a mental status examination. It is helpful to gather information from at least two adult sources – preferably from different settings in a child´s life (e.g., home or school)- about the child´s symptoms. Conditions that may be the focus of stimulant use are:

- Attention-deficit/hyperactivity disorder. The clinician should document that the patient has the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) or International Classification of Diseases-10 (ICD-10) diagnosis of attention-deficit/hyperactivity disorder. There is no empirically proven threshold of attention-deficit/hyperactivity disorder symptoms that can be used to predict treatment response to stimulant medication. Fortunately, the ratio of benefit to side effects is very favorable for methylphenidate, dextroamphetamine and mixed salts amphetamine\* (see note at end of the "Major Recommendations" field). The severity of the symptoms and the resulting impairment in the patient 's academic or occupational, social, and family functioning should be assessed. Only those patients with moderate to severe impairment in two different settings should be considered for stimulant treatment. A child with attentiondeficit/hyperactivity disorder, predominately inattentive type with severe academic problems at school and during homework may be considered for stimulant treatment, even if his peer relationships and family functioning are not otherwise affected. Teacher ratings of attention-deficit/hyperactivity disorder symptoms, using a validated and age- and sex-normed instrument, should be obtained at baseline and after treatment with stimulants [CG]. To qualify for treatment, the child should be living with a responsible adult who can administer the medication; the school should also provide personnel for supervising in-school doses. In addition to stimulants, consider other effective modalities, such as parent training, psychoeducation, and others, as described in the Academy's Practice Parameters for attentiondeficit/hyperactivity disorder.
- Attention-deficit/hyperactivity disorder comorbid with conduct disorder. Only
  those patients with symptoms that cause moderate to severe impairment in
  at least two different settings should be considered for stimulant treatment. If
  the child is an adolescent, the clinician should be certain that the patient is
  not using non-prescribed stimulants [CG].
- Narcolepsy. The patient suffers from excessive sleepiness with recurrent sleep attacks and cataplexy (brief episodes of bilateral weakness typical of the rapid eye movement phase of sleep, even though the individual is awake) [CG].
- Apathy due to a general medical condition. Individuals who have suffered a
  brain injury due to a cerebral vascular accident, trauma, human
  immunodeficiency virus (HIV), or a degenerative neurological illness often
  exhibit apathy or symptoms of inattention and impulsivity similar to attentiondeficit/hyperactivity disorder. If the illness or trauma occurred after age 7,
  they would not meet criteria for attention-deficit/hyperactivity disorder.
  Clinical experience and small controlled trials suggest that stimulants are
  helpful in reducing such behaviors in these patients [OP]. Doses of the
  stimulants are typically lower than those used in the treatment of attentiondeficit/hyperactivity disorder.
- Adjuvant medical uses of stimulants. Some severely medically ill patients develop severe psychomotor retardation secondary to the illness itself, the sedative effects of pain medication, or toxic effects of the agents used to treat

- the primary illness (i.e., chemotherapy for cancer). Case reports suggest that low doses of stimulants may enable these patients to be more alert and have a higher energy level and better appetite [OP].
- Treatment refractory depression. Stimulants, particularly methylphenidate, have been used to augment the effects of tricyclic antidepressants. [OP] Doses are usually lower than used to treat attention-deficit/hyperactivity disorder.

#### Contraindications

Contraindications to the use of stimulants in clinical practice include previous sensitivity to stimulant medications, glaucoma, symptomatic cardiovascular disease, hyperthyroidism, and hypertension. These medications must be used with great care if there is a history of drug abuse. They are contraindicated in patients with a history of illicit use or abuse of stimulants, unless the patient is being treated in a controlled setting or can be supervised closely [NE]. If a member of the household has a history of use or abuse of stimulants, steps should be taken to make certain that the medications prescribed are not abused. Concomitant use of monoamine oxidase (MAO) inhibitor is contraindicated [NE]. Stimulants should not be administered to a patient with an active psychotic disorder [NE].

The U.S. Food and Drug Administration-approved package inserts add other contraindications, including motor tics, marked anxiety, and a family history or diagnosis of Tourette's Disorder. However, the recent clinical trial literature reveals that these conditions may not be worsened by stimulant treatment. Because the package insert mentions that methylphenidate lowers the seizure threshold, it is best to initiate methylphenidate after the seizure disorder is under control with anticonvulsants. There are published studies showing that epileptic patients on anticonvulsants do not show a change in their seizure frequency when methylphenidate is added. The package insert warns against starting methylphenidate in children under the age of 6, although there are now 8 published reports finding that methylphenidate is effective in this age range. On the other hand, the package inserts for pemoline, dextroamphetamine and mixed salts of amphetamine\* (see note at end of the "Major Recommendations" field) allow their use in children down to age 3, even though there are no published controlled studies of these drugs in preschoolers.

#### Use of Stimulants

Using stimulant medication in treating patients with attention-deficit/hyperactivity disorder or attention-deficit/hyperactivity disorder plus conduct disorder requires careful documentation of prior treatments, selection of the order of stimulants to be used, using the recommended starting dose of each stimulant, deciding on both a minimum and maximum dose, using a consistent titration schedule, deciding on a method of assessing drug response, managing treatment-related side effects, and providing a schedule for the monitoring of long term medication maintenance [CG].

 <u>Documentation of prior treatment</u>. Documentation of adequate assessment, previous psychosocial treatments, and previous psychotropic medication treatments should be done prior to initiating stimulant treatment [MS].

- Information collected should include the name of the medication, dosage, duration of the trial, response and side effects, and estimation of compliance. Other useful information may include special school placements and psychosocial treatments including behavioral modification, parent training, and daily report card.
- Obtain a baseline blood pressure, pulse, height and weight in the context of a physical examination. All children should have a routine physical examination prior to starting stimulant medications. This physical should include vital signs, including blood pressure, pulse, height, and weight. This will help discover adolescents and younger children who may have malignant hypertension and adults who have essential hypertension and/or cardiac arrhythmias. Children should have their vital signs checked annually during their routine physical examination. Adults on stimulants should have blood pressure and pulse checked on a quarterly basis by the treating physician or by the primary care physician.
- Selecting the order of stimulants to be used. The first stimulant used may be methylphenidate, mixed salts amphetamine\*, or dextroamphetamine\* (see note at end of "Major Recommendations" field), depending on clinician and patient preference. However, on average, the problematic effects on appetite and sleep are greater with mixed salts amphetamine or dextroamphetamine, consistent with their longer excretion half-lives. Pemoline is not recommended by this parameter because, although it is effective, it may lead to hepatic failure.
- <u>Using the recommended starting dose of each stimulant</u>. The starting doses of stimulants are 5 mg for methylphenidate and 2.5 mg for dextroamphetamine/mixed salts amphetamine\* (see note at end of "Major Recommendations" field), generally given in the morning after breakfast and around 12 noon after lunch.
- Deciding on both a minimum and maximum dose. For children and adolescents, minimum effective doses should be used to initiate therapy. A minimum starting dose is either 5 mg of methylphenidate or 2.5 mg of amphetamine\* (see note at end of "Major Recommendations" field) in children and adolescents, given in the form of an immediate-release tablet. These doses should be started on a twice- or three-times daily basis because of their very short duration of action. The maximum total daily doses are calculated by adding together all doses taken during a given day. The Physician´s Desk Reference states that the maximum total daily dose is 60 mg for methylphenidate and 40 mg for amphetamines\* (see note at end of "Major Recommendations" field). Children less than 25 kg generally should not receive single doses greater than 15 mg of methylphenidate or 10 mg of dextroamphetamine/mixed salts amphetamine\* (see note at end of "Major Recommendations" field). The consensus from practice is that doses may go higher than the Physician's Desk Reference-recommended upper limits on rare occasions. Experts often limit the upper range to a total daily dose of 40 mg of amphetamine\* (see note at end of "Major Recommendations" field), or 25 mg for a single dose of methylphenidate, when methylphenidate is given in multiple doses throughout the day. If the top recommended dose does not help, more is not necessarily better. A change in drug or environmental or psychosocial intervention may be required.
- <u>Using a consistent titration schedule</u>. If symptom control is not achieved, the dose generally should be increased in weekly increments of 5-10 mg per dose for methylphenidate or 2.5-5 mg for dextroamphetamine/mixed salts amphetamine\* (see note at end of "Major Recommendations" field). [CG].

Alternatively, the physician may elect to use a fixed-dose titration trial, similar to that found in the Multimodal Treatment Study of Attention Deficit – Hyperactivity Disorder (MTA Study), where a full set of different doses is switched on a weekly basis. At the end of such a trial, the parent and physician can meet to decide which dose worked best for the child. The advantage for such a full dose trial is that a child is less likely to miss a high dose that might yield additional improvement [OP].

- <u>Deciding on a method of assessing drug response</u>. Follow-up assessment should include evaluation of target symptoms of attention-deficit/hyperactivity disorder, asked regularly of the parent and of a teacher [CG]. These clinical assessments may be supplemented by the use of parent and teacher rating scales. It is important to obtain self-ratings from adolescents and from adults.
- Managing treatment-related side effects. Side effects should be systematically
  assessed by asking specific questions to patients and to parents about known
  side effects, such as insomnia, anorexia, headaches, social withdrawal, tics,
  and weight loss [CG]. Weighing the patient at each visit provides an objective
  measure of loss of appetite.
- Providing a schedule for initial titration and monitoring. [CG]. During initial
  titration and during later drug dose adjustments, contact can be maintained
  on a weekly basis by telephone [CG]. The titration phase of stimulant
  initiation covers the period of dose adjustment, and often requires two to four
  weeks.
- Providing a schedule for monitoring the drug maintenance phase. Afterwards, patients can be followed regularly for lengthy periods on the same dose, and are said to be in a maintenance phase. Follow-up appointments should be made at least monthly until the patient 's symptoms have been stabilized [MS]. Changes in the frequency of physician visits should be governed by robustness of drug response, adherence of the family and patient to a drug regimen, concern about side effects, and need for psychoeducation and/or psychosocial intervention. More frequent appointments should be made if there are side effects, significant impairment from comorbid psychiatric disorders, or problems in adherence to taking the stimulants. The response and severity of the patient 's symptoms determine the frequency of appointments. Optional treatment components include the collection of teacher reports prior to or at each visit, provision of reading materials, and discontinuation trials.

## Complications and Side Effects

Almost all stimulant-related side effects reported for children and adolescents with attention-deficit/hyperactivity disorder are rare and short-lived, and responsive to dose or timing adjustments. Mild side effects are common, and serious side effects are rare and short-lived if the medication is reduced in dose or discontinued. Severe movement disorders, obsessive-compulsive ruminations or psychotic symptoms are very rare and disappear when the medication is stopped. Recently, it has been determined that patients on pemoline experience hepatic failure 17 times more frequently than the spontaneous rate; this rare but serious side effect is a major complication of pemoline usage. In placebo-controlled studies of stimulants, parents report only seven side effects occurring more often on stimulant than on placebo: delay of sleep onset, reduced appetite, weight loss, tics, stomach-ache, headache, and jitteriness. Careful lowering of the dose or

changing the timing of the dose administration may alleviate the side effect [CG]. When insomnia or appetite loss occurs but the stimulant is highly beneficial in reducing the target symptoms, a variety of adjunctive tactics are available to ameliorate the side effects. Staring, daydreaming, irritability, anxiety, and nailbiting may typically decrease with increasing dose, representing pre-existing symptoms rather than side effects.

\*Note from the National Guideline Clearinghouse: On February 10, 2005, the U.S. Food and Drug Administration (FDA) issued a Public Health Advisory to notify healthcare professionals that Health Canada, the Canadian drug regulatory agency, has suspended the sale of Adderall XR in the Canadian market. Adderall XR is a controlled release amphetamine used to treat patients with Attention Deficit Hyperactivity Disorder (ADHD). The Canadian action was based on U.S. post-marketing reports of sudden deaths in pediatric patients. FDA is continuing to evaluate these and other post-marketing reports of serious adverse events in children, adolescents, and adults being treated with Adderall and related products. Adderall XR is approved in the United States for the treatment of adults and pediatric patients 6-12 years old with ADHD, and Adderall, the immediate release formulation of the drug, is approved for pediatric patients with ADHD. See the FDA Web site for more information.

## Definitions:

[MS] "Minimal Standards" are recommendations that are based on substantial empirical evidence (such as well controlled, double-blind trials) or overwhelming clinical consensus or legal and regulatory requirements. Minimal standards are expected to apply more than 95 percent of the time, i.e., in almost all cases. When the practitioner does not follow this standard in a particular case, the medical record should indicate the reason.

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[OP] "Options" are practices that are acceptable, but not required. There may be insufficient empirical evidence to support recommending these practices as minimal standards or clinical guidelines. In some cases they may be indicated, but in other cases should be avoided. If possible, the practice parameter will explain the pros and cons of these options.

[NE] "Not Endorsed" refers to practices that are known to be ineffective or contraindicated.

# CLINICAL ALGORITHM(S)

An algorithm is provided for the diagnostic assessment and family consultation regarding treatment alternatives.

# EVIDENCE SUPPORTING THE RECOMMENDATIONS

# TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see "Major Recommendations").

# BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

- Short-term trials have reported improvements in the most salient and impairing behavioral symptoms of attention-deficit/hyperactivity disorder. Except for pemoline, the immediate release preparations of the major stimulants have a brief duration of action, providing clinical benefits for 3 to 5 hours after oral dosing. This requires multiple doses during the day to maintain improvement. In the classroom, stimulants decrease interrupting, fidgetiness, and finger tapping, and increase on-task behavior. At home, stimulants improve parent-child interactions, on-task behaviors, and compliance. In social settings, stimulants improve peer nomination rankings of social standing and increase attention during sports activities. Stimulants decrease response variability and impulsive responding on laboratory cognitive tasks, increase the accuracy of performance, and improve shortterm memory, reaction time, math computation, problem-solving in games, and sustained attention. Time-response studies show a differential impact across symptom domains, with behavior affected more than attention. Stimulants continue to ameliorate the symptoms of attentiondeficit/hyperactivity disorder in the presence of other comorbid Axis I disorders, and may even show positive benefit on the comorbid disorder (such as conduct disorder and anxiety disorder).
- Until recently, the benefits of stimulant treatment have been demonstrated only in short-duration trials, most lasting less than 12 weeks. To address this issue, prospective, longer-duration randomized controlled trials lasting 12 to 24 months have been conducted. Doses up to 50 mg/day of methylphenidate were used in these long-duration studies. The largest of these studies, the U.S. National Institute for Mental Health (NIMH) Multimodal Treatment Study of Attention Deficit Hyperactivity Disorder (MTA Study), showed that stimulants (either by themselves or in combination with behavioral treatments) lead to stable improvements in attention-deficit/hyperactivity disorder symptoms as long as the drug continues to be taken.
- Though there are only a few randomized controlled trials (RCTs) documenting their efficacy, stimulants have proven effective in the treatment of narcolepsy.

#### POTENTIAL HARMS

## Side Effects of Stimulants

Almost all stimulant-related side effects reported for children and adolescents with attention-deficit/hyperactivity disorder are rare and short-lived, and responsive to

dose or timing adjustments. Mild side effects are common, and serious side effects are rare and short-lived if the medication is reduced in dose or discontinued. Severe movement disorders, obsessive-compulsive ruminations or psychotic symptoms are very rare and disappear when the medication is stopped. Recently, it has been determined that patients on pemoline experience hepatic failure 17 times more frequently than the spontaneous rate; this rare but serious side effect is a major complication of pemoline usage. In placebo-controlled studies of stimulants, parents report only seven side effects occurring more often on stimulant than on placebo: delay of sleep onset, reduced appetite, weight loss, tics, stomach-ache, headache, and jitteriness. Staring, daydreaming, irritability, anxiety, and nailbiting may typically decrease with increasing dose, representing pre-existing symptoms rather than side effects.

#### CONTRAINDICATIONS

#### **CONTRAINDICATIONS**

- Contraindications to the use of stimulants in clinical practice include previous sensitivity to stimulant medications, glaucoma, symptomatic cardiovascular disease, hyperthyroidism, and hypertension. These medications must be used with great care if there is a history of drug abuse. They are contraindicated in patients with a history of illicit use or abuse of stimulants, unless the patient is being treated in a controlled setting or can be supervised closely. Concomitant use of a monoamine oxidase (MAO) inhibitor is contraindicated. Stimulants should not be administered to a patient with an active psychotic disorder.
- Methylphenidate may lower the seizure threshold.

# QUALIFYING STATEMENTS

#### **OUALIFYING STATEMENTS**

Practice parameters are strategies for patient management, developed to assist clinicians in psychiatric decision-making. This parameter, based on evaluation of the scientific literature and relevant clinical consensus, describe generally accepted approaches to assess and treat specific disorders or to perform specific medical procedures.

This parameter is not intended to define the standard of care; nor should they be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and available resources. Given inevitable changes in scientific information and technology, these parameters will be reviewed periodically and updated when appropriate.

# IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## **IMPLEMENTATION TOOLS**

# Clinical Algorithm

For information about <u>availability</u>, see the "Availability of Companion Documents" and "Patient Resources" fields below.

# INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

**IOM CARE NEED** 

Living with Illness

IOM DOMAIN

Effectiveness Patient-centeredness Safety

# IDENTIFYING INFORMATION AND AVAILABILITY

# BIBLIOGRAPHIC SOURCE(S)

American Academy of Child and Adolescent Psychiatry. Practice parameter for the use of stimulant medications in the treatment of children, adolescents and adults. Washington (DC): American Academy of Child and Adolescent Psychiatry; 2001 Jun 4. 96 p. [164 references]

Practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults. J Am Acad Child Adolesc Psychiatry 2002 Feb; 41(2 Suppl): 26S-49S. [164 references]

## **ADAPTATION**

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Jun 4

GUI DELI NE DEVELOPER(S)

American Academy of Child and Adolescent Psychiatry - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Child and Adolescent Psychiatry (AACAP)

## **GUIDELINE COMMITTEE**

Work Group on Quality Issues

## COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

This parameter was developed by:

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AACAP Staff: Kristin Kroeger

## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

As a matter of policy, some of the authors to these practice parameters are in active clinical practice and may have received income related to treatments discussed in these parameters. Some authors may be involved primarily in research or other academic endeavors and also may have received income related to treatments discussed in these parameters. To minimize the potential for these parameters to contain biased recommendations due to conflict of interest, the parameters were reviewed extensively by Work Group members, consultants, and American Academy of Child and Adolescent Psychiatry (AACAP) members; authors and reviewers were asked to base their recommendations on an objective evaluation of the available evidence; and authors and reviewers who believed that they might have a conflict of interest that would bias, or appear to bias, their work on these parameters were asked to notify the American Academy of Child and Adolescent Psychiatry.

# **GUIDELINE STATUS**

This is the current release of the guideline.

# **GUIDELINE AVAILABILITY**

Electronic copies: Available (to members only) from the <u>American Academy of Adolescent and Child Psychiatry (AACAP) Web site</u>.

Print copies: Available from AACAP, Communications Department, 315 Wisconsin Avenue, NW, Washington, DC 20016. Additional information can be obtained through the AACAP Publication Catalog for Parameters.

# AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

Greenhill LL, Pliszka S, Dulcan MK, Bernet W, Arnold V, Beitchman J, Benson RS, Bukstein O, Kinlan J, McClellan J, Rue D, Shaw JA, Stock S, Kroeger K. Summary of the practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults. J Am Acad Child Adolesc Psychiatry 2001 Nov; 40(11):1352-5.

#### PATIENT RESOURCES

None available

# NGC STATUS

This summary was completed by ECRI on February 12, 2002. The information was verified by the guideline developer on May 1, 2002. This summary was updated by ECRI on February 11, 2005, following the release of a public health advisory from the U.S. Food and Drug Administration regarding Adderall and related products.

#### COPYRIGHT STATEMENT

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Date Modified: 4/25/2005

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